

MECHANIC STUDY GUIDE

Heating & Air Conditioning

Automobile & Light Truck Repair

Listed below are a number of items and subjects which make up the mechanic certification test identified above. An individual's ability to pass the certification test will depend upon the amount of knowledge the person has concerning these items. **NOTE:** There could be up to 5 additional pre-test questions. These questions will not count but may be used on a later version of the test. Your answers to these pre-test questions will not affect your score. Since you won't know which they are, you should answer all questions.

Heating & Engine Cooling System

Diagnosis - 22%

Leak diagnosis
Low coolant in radiator
Thermostat
Coolant mixture
Low heater output
Windshield fogging
Heater core hose routing
Radiator cap
Defrost operation
Overheating

General Knowledge of A/C Components & Their Functions - 16%

Receiver drier
Ambient temperature switch
Orifice expansion tube
Compressor muffler
Condensor
Evaporator
Fixed orifice tube
Halide tester

General Knowledge of A/C Systems - 18%

R-12 v.s. R134-a
Refrigerant (understanding change between liquid & gas)
Operating pressures
Effect of moisture in the system
Effect of outside temperature & humidity on system

A/C Diagnosis - 24%

H₂O at air ducts
Finding leaks
Overcharged system
Compressor clutch
Gauge set readings
Lack of cold air
Schematic diagnosis

A/C Repair Procedures - 16%

Precautions when discharging system
Compressor o-ring replacement
Correction of excessively high pressure
Compressor replacement
Hose replacement
Charging the system
Leak detection
Condensor replacement

Refrigerant Recovery, Recycling & Handling - 4%

CFC's (Chlorofluorocarbons) and their affect on the environment
Recycle or replace R-12 and R-134a

SAMPLE QUESTION:

An A/C control system has an apparent vacuum leak. Which of the following is the best way to locate the leak?

- A. Feel around the suspected line or component.
- B. Trace the origin of the hissing sound.
- C. Install known good hoses and components in place of the original components.
- D. Spray water on the suspected areas.

ANSWER: B